Idaho Naturalist news

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Article and Photo by Sara Focht, IMNP Program Coordinator, IDFG

Idaho Master Naturalists congregated at the program's birth-place, Harriman State Park, in late September. Sixty-five naturalists, to be exact, came from all seven chapters, some traveling 11 hours to join the fun.

And fun we had! I really wanted participants to have a good time, learn about nature, feel inspired, and celebrate their program and the good work they do. After it was said and done, besides weighing a few pounds heavier from the amazing catered meals, I felt all was accomplished.

Since the IMNP was started in 2008, Idaho Master Naturalists have logged 74,671 hours. Impressive numbers, but think of all the people who have been reached by Master Naturalists. All the animals counted and recorded, all the land cleaned up and fences taken up and down. The real impact of the IMNP is difficult to measure...and perhaps it is unmeasurable.

Our guest speakers at the rendezvous helped us better understand monarchs in Idaho, bat survey techniques, recovery of the grizzly bear, bear safety, the geology of the Yellowstone region, and the delicate population of swans that call the area "home."

The 2015 Rendezvous was funded by participant fees, The Idaho Fish and Wildlife Foundation, the Wildlife Diversity program at IDFG and the Sagebrush-steppe Chapter.

THANK YOU! To the members of the Rendezvous planning and check-in committee, left to right: Jerry Steed, Cathy Dufault, Mary VanFleet, Tony Appelhans, Kyle Babbitt, Karen Davidson, Kathleen Stevens, Phyllis King, and Nina Waite. Not pictured, Sara Focht.

The Idaho Naturalist News is a quarterly newsletter of the Idaho Master Naturalist Program.

Edited by Linda Kahn and Sara Focht

For questions and comments contact Sara Focht at Sara.Focht@idfg.idaho.gov.

Send newsletter contributions to Linda Kahn at hcmc214@yahoo.com.

Award Winners

Sara Focht, Idaho Master Naturalist Program Coordinator, IDFG

Idaho Master Naturalist Mary VanFleet (Henry's Fork Chapter) was awarded the Idaho Master Naturalist of the year award 2008-2015. Mary helped start the first chapter of the program in Island Park in 2008. Since then, she has played a very active role in her chapter by holding various board offices and planning the education sessions, recruiting participants, and keeping track of volunteer time for her chapter.

Mary's organizational skills and communications skills help her chapter stay in touch with the state program coordinator, which aids the overall success of their chapter. Mary also participates in managing the state-wide program, such as suggesting annual pin awards and helping plan the 2015 Rendezvous.

Mary performs volunteer work outside chapter business too! Over the years, Mary has done door to door "Bear Aware" education in her community, as well as educate neighborhoods about noxious weeds. She played a key role in her chapter's monofilament recycling program. She has performed big game track surveys and spawned fish at Henry's Lake Hatchery. Mary has participated in swan observations, completed migratory waterfowl surveys, picked up trash along the highway, measured fish at a fish trap, performed angler surveys, and inventoried small mammals, just to name a few of her projects.

The mission of the IMNP is to develop a corps of well-informed volunteers to actively work toward the stewardship of Idaho's natural world. Mary does this and helps others do the same.

Ken Olson, from the Upper Snake Chapter of the Idaho Master Naturalist Program, was the recipient of the Idaho Master Naturalist Project of the year. Though many Master Naturalists work on this project, Ken is the ringleader and without Ken's dedication and leadership, the "Be Bear Aware" Education Trailer would not have the impact it has!

Ken and crew applied and received a grant to fix up Idaho Department of Fish and Game's "Be Bear Aware" trailer. With new equipment, spruced up taxidermies, and great props, the trailer traveled around the region and made contact with 12,000 people in 2014 alone.

Ken shows people the difference between black and grizzly bears, how to camp and travel safely in bear country, and what to do if you have a bear encounter. This project and Ken's efforts truly embody a Master Naturalist Project that is worth celebrating and recognizing. Congratulations to Ken Olson and all the Master Naturalists who work with the "Be Bear Aware" Education trailer for being stewards of Idaho's bears!

Idaho Master Naturalist Awards

2016-2017

The nomination period is open for awards for the 2016-2017 time period. Nominations are due August 1, 2017 and will be awarded in the fall of that year. If you wish to submit an award nomination, contact Sara Focht for submission in formation. Forms can be found at https://fishandgame.idaho.gov/sites/Wildlife/IDMasterNaturalist/2015rendezvous/Award%20nomination%20forms/Idaho%20Master%20Naturalist%20Awards.pdf

Idaho Master Naturalist of theYear This award is to honor a person who exemplifies what it means to be a Master Naturalist. Qualifications for this award might include, but are not limited to, number of hours, number of years, leadership, initiative, communication, community connections.

Idaho Master Naturalist Chapter of the Year This award is to honor a chapter that has had a positive impact toward conservation in Idaho. These chapter qualities may include, but are not limited to, number of years in existence, number of members trained, number of hours contributed by members, diversity of projects, communication, community outreach, initiative.

Idaho Master Naturalist Sponsor Organization of the Year This award is to honor an organization or agency that has contributed significantly to the IMNP. Eligibility for this award may include but is not limited to, number of years sponsoring a chapter, meeting space donated to a chapter, teachers/speakers donated to a chapter, volunteer projects offered to chapters, financial resources offered to chapters.

Idaho Master Naturalist Sponsor of the Year This award is to honor an *individual* that works for a chapter sponsoring agency. For eligibility, this individual may have exceptional qualities that may include, but are not limited to, number of years helping a chapter, number of years and quality of presentations to a chapter, providing volunteer opportunities to a chapter, helping with administrative tasks for a chapter.

Idaho Master Naturalist Project of the Year This award is to recognize an outstanding project either generated by Master Naturalists (individuals or chapters) or taken on by Master Naturalists to the point where the project would not have been completed otherwise. Projects considered for this award will be judged on, but not limited to, the following qualities, number of Master Naturalists involved, initiative, community involvement and outreach, number of people served, number of acres served.

Ken Olson, recipient of 2008-2015 Project of the Year, helps Idaho Master Naturalist Clem Yonker (Pend Oreille Chapter) practice spraying inert canisters of bear spray at a dangerous picnic table.

Master Naturalist Honored at Harriman State Park

Jodi Stiehl, President, Friends of Harriman State Park

James F. Kemp, Idaho Master Naturalist from the Henry's Fork Chapter, was honored with Harriman State Park's new Turkeyfeather Award, named in homage of Jim who often sports a turkey feather in his hat while volunteering. The Turkeyfeather Award will be given annually to a person who selflessly volunteers their service to projects that benefit Harriman State Park. Jim has worked on Friends of Harriman State Park's first project, "Buy-A-Buck," since its inception in 2010 and is the reason why this project will be completed this fall. He has spent countless hours on his own moving jacks, lining out rails and pounding nails while also rounding up many, many volunteer build crews to help with their time, dollars, and sweat. Hat's off to you, Jim, and thank you.

Jodi Stiehl, President of Friends of Harriman State Park (left) and Kate Chase, founder of Friends of Harriman State Park (right) award Idaho Master Naturalist James F. Kemp, from the Upper Snake Chapter, the Turkeyfeather Award. Photo courtesy Island Park News.

Friends of Harriman State Park is a nonprofit organization dedicated to community projects that directly benefit Harriman State Park. Visit their website at http://friendsofharriman.blogspot.com/. Photo courtesy FHSP.

The American Badger

Sara Focht, Wildlife Educator, Idaho Department of Fish and Game MK Nature Center

An American Badger, slightly frowning. Photo by Joel Depuy.

In Idaho, we share our home with a diverse and interesting group of animals in the weasel family. Also known as the Mustelid family, members include the ellusive wolverine, the American badger, the least weasel, mink, otters, and the American Martin.

The American badger is an carnivorous mammal (borderline omnivorous) that feeds on ground squirrels and pocket gophers, mice, lizards or anything else on the ground, including roots, seeds, mushrooms and eggs. And to do so, they have all the adaptations they need to dig up their food. They have long claws, tough snouts, and the ability to plug exit holes of their prey. Their flat, squatty bodies are perfect for crawling into holes to rest or find food.

Ecologically, badgers fill an important niche in sagebrush ecosystems in Idaho. They eat just about anything and they dig holes that aerates the soil...providing oxygen and water to penetrate the soil. Their abandoned holes serve as excellent shelters for animals that are unable or not as good at digging their own holes, such as burrowing owls, snakes, salamanders, frogs, and foxes. Badgers are prey for golden eagles, wolves, coyotes, and mountain lions.

The normal solitary lifestyle briefly ends in fall, when badgers mate. Implantation of the egg is delayed until December and sometimes as late as February. Kits are born in April and will disperse over the summer months.

In Idaho, badgers are classified as “unprotected nongame animals”, which means to kill one, you need a hunting license, but there are no limits, seasons, or restrictions.

If you ever see a badger, you might keep your distance, but watching one at work (digging, waddling, watching, hunting) is so interesting!

Volunteering is Fun

Linda Jarsky, Idaho Master Naturalist, Sagebrush-steppe Chapter

The Idaho Master Naturalist Program is all I had hoped it would be. Post-retirement and determined to run a few memory cells around in my brain, I've learned a little in the class presentations and been hungry for more. The speakers have been enthusiastic about their fields, organized in their presentations, and courteous to those of us struggling to condense their respective PhD's into a morning's accessible body of knowledge. For example, geology is about more than rocks. Mushrooms can be delicious or deadly. Bats need love, too, and fish inspire rabid devotion. No pun there! Birds, the topic I was most eager to learn about, exhibit behaviors and courting rituals as diverse as their plumage or habitats.

What I have enjoyed most is the opportunity to associate with children again. The sponsors the Sagebrush-steppe Chapter offer creative and entertaining outreach opportunities for Master Naturalist to interact with the kids. Unlike us oldsters who puff up like sage grouse when we remember several facts at once and as needed, their command of data, their applications of what they've observed, their ability to comprehend messages of many media, remind us of our earlier times. Earlier than yesterday, alas. Scat models, for example, produce the expected grimaces or giggles, but the response to the logic of tracking and dietary studies is nothing short of rewarding. Colonoscopies lack the same charm. These youngsters don't need to be convinced that "nature," aside from being "real," is enthralling.

The Boise Watershed facility (and wastewater treatment plant) is an imaginative and lucid display of facts and caveats that could not be more basic or essential. The connection between what goes in and what comes out, of our bodies and our communities, is easily grasped by these young minds. Providing this important information when they are so eager to understand their world will foster more responsible and interested citizenry, amenable to the sorts of regulation, environmental protection, and sustainability practices that may have seemed capricious or optional, fluffy, silly, or vague when we used the outhouse at Granddad's.

Upon discovery of any sort of visual or tactile aid, elements highly refined and useful by all the entities Master Naturalists encounter, young brains run those memory cells around their brains, find perches for practical and pertinent facts, share these experiences in the social setting of their peers that validates or enhances the lessons, and we get lucky. We don't even have to wait long for the fine results of an inspired and hopeful next generation. We must be prepared, however, for an occasional admonition about our behaviors or habits. They understand that it is their world they're saving.

Linda Jarsky (left) and fellow Idaho Master Naturalist student Tricia Kennedy on the geology field trip.

16 Master Naturalists, 369 students, and 1 Beautiful River

Left to right: Sandy Sweet, Michelle Meyers, Patrice Davies, and Bronwyn Myers after a hard day at the river....looking pretty happy.

The fall of 2015 marked the 5th annual Riverside Rangers Program in Boise, Idaho. This program is hosted by the Idaho Department of Fish and Game MK Nature Center. It serves K-3rd graders at Riverside Elementary School, a local Boise school luck enough to be about one block away from the Boise River.

Hauling gear, left to right: Cricky Simon, Bronwyn Myers, Cindy Clark and IDFG MK Nature Center Superintendent Dave Cannamela.

Each fall, kids spend two hours along the non-paved section of the Boise Greenbelt learning about plants and animals that live right there in their neighborhood. Many of the kids walk on the path with their parents, but some have never been to the river!

This program would not be possible without the overwhelming support of the Idaho Master Naturalists (Sagebrush-steppe Chapter). When I prompted the chapter members for help this year, I had about 20 people respond! I actually had to turn volunteers away...something that is hard to do.

Thank you to the volunteers to spent their time at Riverside Rangers and brought their smiles, enthusiasm, energy and patience!

Camouflage Station taught by Idaho Master Naturalists Susan Wildwood, Margit Donhowe, Susan Allison and Cricky Simon.

Fall Leaves Station taught by Barbara McGillivary, Michelle Meyers, Colleen Greenwalt, and Bronwyn Myers.

Crayfish Ecology Station taught by Alice Crockett, Tim Merrick, Cindy Clark, Patrice Davies, and Melissa Jannusch.

Bird Adaptation Station taught by Marylee Hale and Michelle Meyers.

Monarchs and Milkweed Station taught by Bronwyn Myers and Barb Recla.

Nature Exploration Station taught by Kevin Laughlin and Sandy Sweet.

Asian Clam Invasion

In the summer of 2014, the Pend Oreille Chapter of Idaho Master Naturalists teamed up with University of Idaho (UI) researchers from the College of Natural Resources to learn more about a recent infestation of Asian clams (*Corbicula fluminea*) in Ellisport Bay of Lake Pend Oreille. Asian clams were first introduced into the United States in the 1930s, but had not been detected in northern Idaho lakes until a dive team discovered a small population of Asian clams in Lake Pend Oreille's Ellisport Bay in 2012. The Idaho Department of Agriculture's Tom Woolf informed the UI about the infestation, and urged us to consider studies of control measures.

Asian clams have a life span of between two to five years and each clam can filter up to five gallons a day. This filtration releases nutrients on the bottom. Left unchecked, these clams could affect water quality by changing the availability of nutrients resulting in algal blooms. That in turn could affect other trophic levels (fish), and concentrate calcium (shells) along the shoreline. Such blooms would detract from aesthetics, interfere with swimmers, and the shells may possibly contribute to the establishment of other aquatic invasive mollusks like zebra or quagga mussels (*Dreisena* spp.). Asian clams prefer to live in sand or gravel along the shoreline of streams, rivers, and lakes. Warm temperatures (>60°F) trigger their reproduction. Because they are hermaphroditic (self-fertilizing male and female), *a single clam can cause an infestation*. The mature clams brood young clams inside their shells, and when conditions are appropriate, they release these tiny clams (called veligers) to float in water currents, or adhere to surfaces. They ultimately settle on the bottom and use their single muscular "foot" to bury themselves, and move through sand and gravel sediments.

Since 2012, the Asian clam population in Ellisport Bay has expanded to the south along the shoreline and currently covers approximately 4,000 square feet. Water level management of the top 11.5 feet of the lake at Albeni Falls Dam, with a drawdown of lake levels between November and April, has likely helped to control the expansion of this population. The clams are exposed to the air and freezing winter conditions cause mortality in some shoreline areas. This seasonal draw down has also allowed researchers easy access to the area of infestation during the fall and winter months.

An infestation of Asian clams in Lake Tahoe, a high mountain lake with similar water quality to Lake Pend Oreille on the California/Nevada border, was first ignored and within five years, the clam population in some locations reached a density of more than 150 clams per square foot. Subsequently, managers applied non-permeable benthic barriers (rubber pond liner) to isolate the clams in the substrate and deprive them of oxygen thereby asphyxiating them. The Lake Tahoe Regional Planning Agency coordinated the placement of barriers over five acres of lake bottom that resulted in 98% clam mortality.

Left: Asian Clam, Center for Lakes and Reservoirs, photo by Robyn Draheim on Flickr CC BY-NC 2.0

With funding from a program with the U.S. Fish and Wildlife Service and the U.S. Geological Survey, our team at the UI elected to use similar barriers and applied sodium hydroxide (NaOH) beneath the barriers to elevate the pH and enhance clam mortality. The NaOH was contained in biodegradable burlap bags placed underneath the non-permeable barrier. Elevating the pH with addition of NaOH has been effective in killing organisms in ship bilge and ballast water. In laboratory trials at UI, we observed that a pH of 12 successfully killed Asian clam veligers within one hour, and large adults within ten days. Sodium hydroxide is an ideal control agent to raise the pH as it is easily neutralized by carbon dioxide to yield a non-toxic salt ($2NaOH + CO_2$ à $Na_2CO_3 + H_2O$).

To support our experimental applications, the U.S. Fish and Wildlife Service obtained a pesticide application permit from the U.S. Environmental Protection Agency and the Idaho Department of Agriculture obtained a barrier permit from the U. S. Army Corps of Engineers. In February of 2015, the team deployed barriers along the shore of Ellisport Bay. The operation would not have been possible without the collaboration of the Pend Oreille Chapter of Idaho Master Naturalists and its volunteers including: Naturalists Gail Bolin, Denise Dombrowski, Mary and Dan Haley, and Becky Reynolds. Other area collaborators who provided critical support included the Pend Oreille WaterKeepers (Mary Franzel & Steve Neff), IdaH_2O (Jim Ekens & staff), the University of Idaho, the Department of Environmental Quality (Tom Herron, Regional Water Quality Manager), and the Lake Cocolalla Homeowners Association (Janet Conklin). Betsy Hull of the U.S. Army Corps of Engineers supplied sand and sand bags for our operations. Becky Reynolds and Mary Franzel were instrumental in helping the Moscow-based team collect weekly pH readings above and along barriers.

Preventing infestations of invasive species requires participation by the public at multiple levels. "Clean, Drain and Dry" should be forefront in the mind of any and all people recreating near or in water. Asian clam veligers and other aquatic invasive species easily hitchhike in and on recreational equipment such as bait buckets, waders, kayaks, and other watercraft.

In April, 2015, the researchers collected pH readings beneath the barriers and confirmed that the sodium hydroxide had been fully neutralized. The higher-than-average spring water levels made it difficult to deploy the barriers as initially envisioned; however, researchers believe that they were able to cover enough substrate to test the effectiveness of this tandem barrier/chemical control technique as a "Rapid Response" tool for an invasive aquatic species. Researchers will remove the barriers this fall during lake drawdown to evaluate the clam mortality in the sediment.

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Article by:
Elizabeth Braker, Environmental Science Program, University of Idaho
Christine M. Moffitt, U.S. Geological Survey, Idaho Cooperative Fish and Wildlife Research Unit, University of Idaho
Frank M. Wilhelm, Department of Fish and Wildlife Sciences, University of Idaho
Joe Noonan, Department of Fish and Wildlife Sciences, University of Idaho
Bob Kibler, U.S. Fish and Wildlife Service
Tom Woolf, Idaho State Department of Agriculture

Master Naturalist Mary Haley carries the PVC frame used to ensure that NaOH packets placed under the benthic barriers were evenly distributed. UI students Joseph Noonan and Juan Ortiz-Perez carries a roll of the benthic barrier. Photo by Steve Neff.